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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,011	04/20/2001	Christopher Barron	133031-0003	3074
24267	7590	07/07/2005	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			LUK, LAWRENCE W	
			ART UNIT	PAPER NUMBER
			2187	
DATE MAILED: 07/07/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,011

Applicant(s)

BARRON, CHRISTOPHER

Examiner

Lawrence W. Luk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-28, 33 and 34 is/are allowed.
- 6) ☒ Claim(s) 29-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 29-32 are withdrawn in view of the newly discovered reference(s) to Koga (6,268,710), Ogden (6,070,103) and Nedungadi et al. (5,713,939). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 29 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Koga (6,268,710).

Claim 29

As to claim 29, Koga disclose in figure 1, a multiple-cell rechargeable battery pack (1) comprising: (see column 3, lines 27-36) a plurality of cells (1N... 13, 12, 11, 2N... 23, 22, 21), each of the cells being interconnected in a series line between a pair of opposing battery pack-end terminals adapted to receive a charge current on the series line; (see column 1, lines 6-8) a respective cell monitor/regulator connected across each of the cells for measuring a charge of the each of the cells; (see figure 3B, column 5, lines 7-12) and a respective shunt bridge connected across each of the cells

including a switch that selectively closes the shunt bridge to direct the charge current around the cell through the series line in response to a measurement of the charge of each of the cells by the monitor/regulator.

Claim 30

As to claim 30, Koga disclose in figure 1, column 2, lines 24-37, wherein the cell monitor/regulator includes a comparator that operates the switch to close when the charge respectively exceeds a predetermined reference value.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koga (6,268,710) in view of Ogden (6,070,103).

Claims 31 and 32

As to claims 31 and 32, Koga disclose the elements as in claim 29 except for further comprising a casing for enclosing the cells that is sealed and comprises a biocompatible material adapted for implantation in a body.

Ogden disclose in figure 1, column 4, lines 56-67, further comprising a casing (25) for enclosing the cells (28) that is sealed and comprises a biocompatible material adapted for implantation in body.

Koga and Ogden are analogous art because they are from the same field of endeavor recharging the battery with charger.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include a casing (25) for enclosing the cells (28) that is sealed and comprises a biocompatible material adapted as taught by Ogden for implantation in a body.

The suggestion/motivation for doing so would have been since Ogden disclose in figure 1, an implanted medical device (26), which may be a defibrillator or pacemaker for example, includes housing (25), header (27), receptacles (10), internal battery (28) and conductors (20). Housing (25) preferably is made of titanium or other biocompatible material and includes an interior chamber for housing battery (28), also receptacles (10) are preferably embedded in header (27), receptacles (10) are sealed by self-resealing septums (12) (see column 4, lines 50-67).

Therefore, it would have been obvious to combine Ogden with Koga for the benefit being able to be implanted the cells in a body.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koga (6,268,710) in view of Ogden (6,070,103) as applied to claim 31 above, and further in view of Nedungadi et al. (5,713,939).

Claim 32

As to claim 32, Koga in view of Ogden discloses the elements as claimed, except Koga in view of Ogden fails to teach "**wherein the cells are connected to, and receive**

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the charging current from, a transcutaneous energy transmission (TET) system adapted for implantation in a body so as to receive energy through a skin layer of the body by induction”.

Nedungadi et al. teaches in figure 2, and the paragraph bridging column 2 and 3, wherein the cells (18) are connected to, and receive the charging current from, a transcutaneous energy transmission (12) system adapted for implantation in a body so as to receive energy through a skin layer of the body by induction.

Koga, Ogden and Nedungadi et al. are analogous art because they are from same field of endeavor of recharging the battery with charger.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to have received the charging current from, a transcutaneous energy transmission (TET) system adapted for implantation in a body so as to receive energy through a skin layer of the body by induction as taught by Nedungadi et al. for controlling circuitry in the implantable device for sensing battery voltage and current through the battery.

The suggestion/motivation for doing so would have been an implantable device that implements transcutaneous energy transmission for recharging the device's batteries that minimizes size, weight, and power consumption by minimizing the number of parts. (see column 2, lines 51-55).

Therefore, it would have been obvious to combine Nedungadi et al. with Koga and Ogden for the benefit of having the system include an external energy transmission

device having a coil, a current sensor for sensing current through the coil, and detection circuitry for detecting encoded signal received from the implantable medical device.

Allowable Subject Matter

7. **Claims 20-28 and 33-34** are allowed.

Claim 20

The primary reason for allowance of the claim 20 is the inclusion of **saturating a transistor in response to an output of the comparator when the comparator measures a voltage at the second input greater than a voltage at the first input; and locating battery pack terminals at respective opposing ends of the series of the plurality of the cells, and connecting respective opposing leads of a charging circuit to the terminals at predetermined times so as to charge the plurality of cells.**

Claims 21, 22 and 24-28 depend from claim 20 and therefore are allowable for at least the same reasons noted above with respect to claim 20.

Claim 23

The primary reason for allowance of the claim 23 is the inclusion of **saturating a transistor in response to an output of the comparator when the comparator measures a voltage at the second input greater than a voltage at the first input; monitoring each of the cells based upon an input connected across each of the cells for measuring a charge of the each of the cells respectively, and providing a bridge around the each of the cells, the bridge including a respective bypass**

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resistor and a respective switch and closing the respective switch when the charge of the each of the cells equals a maximum value so as to shunt charge current around the each of the cells through the respective bypass resistor.

Claim 33

The primary reason for allowance of the claim 33 is the inclusion of **an implanted rechargeable battery pack including a battery pack having a plurality of series-arranged cells, having a bridge connected around a first cell, including a bypass resistor in series with a switch, and a cell monitor/regulator having an input connected across the first cell for measuring a charge of the first cell, wherein the cell monitor/regulator closes the switch when a charge of the first cell equals a maximum value.**

Claim 34 depends from claim 33 and therefore is allowable for at least the same reasons noted above with respect to claim 33.

8. RELEVANT ART CITED BY THE EXAMINER

The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure.

See MPEP 707.05 (c).

The following references teach **a casing for enclosing the cell that is sealed and comprises biocompatible material, or atranscutaneous energy transmission (TET) system adapted for implantation in a body.**

<u>U.S. PATENT NUMBER</u>	<u>FIGURES</u>
5,814,091	1
6,788,790	5

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding are (703) 746-7239, (571) 272-2100 for regular communication and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to receptionist whose telephone number is (571) 272-2100.

LWL
June 29, 2005

Lawrence Luk
examiner
6/29/05